

scutellum is longer than broad in this species as compared to the broader rostrum, transverse prothorax and squarish scutellum in *I. chandigarhensis* (Pajni and Singal 1974).

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RECORD OF *POLYPEDILUM* KIEFFER (DIPTERA: CHIRONOMIDAE) IN BHUTAN AND INDIA WITH A NEW SPECIES FROM INDIA¹

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(With seven text-figures)

The survey of Chironomids from Bhutan and India yielded a large number of insects belonging to the different subfamilies of family Chironomidae. The account of the species in each genera have been published or awaits publication elsewhere (Chaudhuri & Ghosh 1981, 1982). This paper records three species of the genus *Polypedilum* Kieffer, previously known from the countries other than India, and describes one Indian species as new to Science. In Bhutan, the genus is represent-

ed by four species namely *Polypedilum ascium*, *P. chaudhurii*, *P. nudiceps* and *P. tripunctum* recently described by Chaudhuri *et al.* (1981).

The insects including types of the species are at present kept in the collections at the department of Zoology, University of Burdwan and will be deposited in the National Zoological Collections, Zoological Survey of India, Calcutta.

KEY TO THE SPECIES OF *Polypedilum* KIEFFER

1. Wing pattern with clouds and pale spots.....2
Wing pattern without clouds but with dark spots3
2. Fore tibial scale triangular with a sharp spine; Anal point trifold *aegyptium* Kief.
Fore tibial scale oval without such spine; Anal point simple and slender.....*stictopterus* John.

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3. Gonostylus bulky bearing 6 setae at its inner apical margin *alticola* Kief.
 Gonostylus moderate bearing 12 setae at its inner apical margin *obscurum* sp. nov.

Polypedilum aegyptium Kieffer

Polypedilum aegyptium Kieffer, 1925, *Bull. Soc. ent. Egypte* 8: 270; Freeman, 1958, *Bull. Br. Mus. nat. Hist. Ent.* 6: 281. *Polypedilum iris* Goetghebuer, 1937, In Linder: *Die. Flieg. Palaear. Reg.* 3(13c): 61. *Polypedilum airense* Freeman, 1956, *Bull. I.F.A.N.*, 18(A): 96.

This species is recognised by the absence of frontal tubercle, presence of dark brown thorax bearing 14-16 paired acrostichals, 8 dorsocentrals, prealars 3 and scutellars; triangular fore tibial scale having a sharp spine; wing with similar nature of brown markings and clouds as shown by Freeman (1958). The hypopygeal features of the present species conform with those described by Freeman (1958) in the African species.

Material examined: 5 ♂♂, Arunachal Pradesh, Pasighat, 2-3, iv. 1977, Coll. B. Bhuyian; 2 ♂♂, Burdwan, West Bengal, 4. iv. 1980, Coll. P. K. Chaudhuri; 1 ♂, Garia, West Bengal, 18.v.1980, Coll. P. K. Chaudhuri.

Polypedilum alticola Kieffer

Polypedilum alticola Kieffer, 1913, *Voy. All aud. Jean. afr. Or. Ins. Dipt.*, 1: 22; Freeman, 1955, *Explor. Parc. nat. Albert. Miss. de Witte*, 83: 26; Freeman, 1955, *S. afr. Animal Life*, 2: 377; Freeman, 1958, *Bull. Br. Mus. nat. Hist. Ent.*, 6: 272; *Chironomus ornatipus* Kieffer, 1918, *Ann. Mus. nat. Hung.*, 16: 68.

The species is distinguished by the wing spots of which the most conspicuous are at the basal third of cell R₄₊₅, other markings being faint. The characters in the present species fully resemble the African counterparts

described by Freeman (1958) except the chaetotaxy which have been put forward as: acrostichals 10 in pairs, dorsocentrals 10, prealars 2 and scutellars 8 in thorax.

Material examined: 4 ♂♂, Raniganj, West Bengal, 17.vii.1977, Coll. P. K. Chaudhuri.

Polypedilum stictopterus Johannsen

Microtendipes stictopterus Kieffer, 1921, *Philip. J. Sci.*, 18: 580.

Polypedilum stictopterus Johannsen, 1932, *Arch. Hydrobiol. Suppl.* 11: 518.

Identification of this species was made by pale spots on the wing, fore tibial scale and the flagellomeres of antenna. Other characters are more or less similar to those described by Johannsen (1932). The chaetotaxy of thorax which may be added to the original description are: acrostichals 12 in pairs, dorsocentrals 9, prealars 3 and scutellars 10.

Material examined: 3 ♀♀, Darjeeling, India, 23.iii.1969, Coll. P. K. Chaudhuri.

Polypedilum obscurum sp. nov.

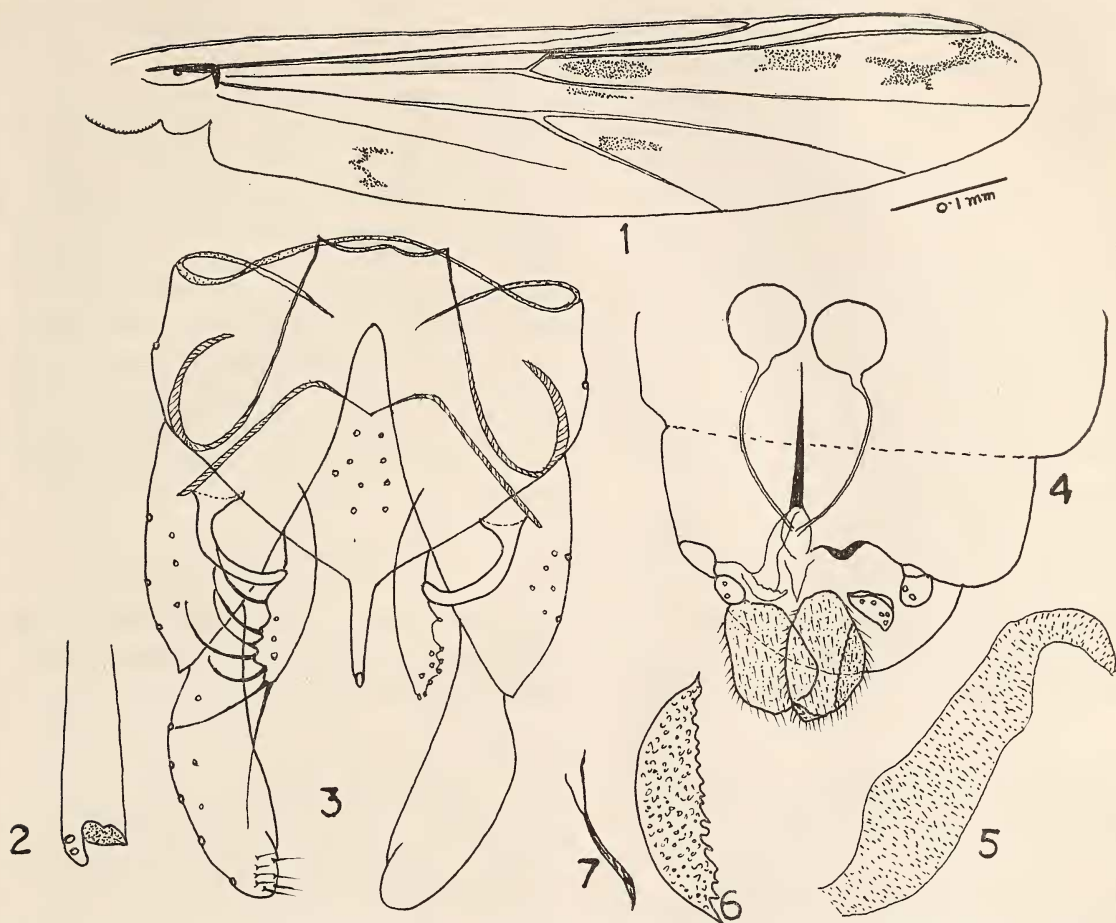
MALE: Body length 4.41 mm, wing length 1.94 mm and breadth 0.52 mm.

Head: Dark brown in colour. Vertex with 13 setae. Corona with 4 setae. Clypeus with 24 setae, clypeal ratio 0.87. Eyes bare, re-inform with a dorsal extension of 0.12 mm long. Frontal tubercle absent. Antenna dark brown, length ratio of flagellomeres I-XIV 3:2:2:2:2:2:2:2:1:1:1:45, AR 1.96. Pedicel ratio 1.0, CA 0.53, CP 1.23.

Thorax: Dark brown in colour. Anteprenotum thin collar like without emergination. Acrostichals 18-20 in pairs, dorsocentrals 24-26 at the anterior half, prealars 4. Scutellum with 12-13 setae, postscutellum dark brown and bare.

Wing (Fig. 1): Hyaline with yellow veins.

NEW DESCRIPTIONS



Figs. 1-7. *Polypedilum obscurum* sp. nov. 1. Wing; 2. Fore tibial scale; 3. Male hypopygium; 4. Female genitalia 5. Dorsomesal lobe 6. Ventrolateral lobe; 7. Apodeme lobe.

Brachiolum with 1 seta. R with 18, R_1 11 and R_{4+5} with 20 setae; R_{2+3} meets C at distance of 0.17 away from R_1 ; r-m proximal to f-cu; An ends below f-cu. Wing with spots distributed as: cell R_{4+5} with 3 spots, distal being larger, cell M_{3+4} with 1 spot near the fork and cell An having 1 irregular marking. In addition to the above, 1 linear dark streak runs along M_{1+2} . Squama with 14 setae. Haltere brown. CR 0.96, VR 1.05.

Legs: Yellow to brown in colour except

dark brown femur. Fore tibial scale (Fig. 2) with 2 setae. LR 1.38 in fore, LR 0.6 in mid and LR 0.75 in hind legs. TR of hind leg 1.27.

Abdomen: Dark brown in colour. Segment VIII constricted at the base.

Hypopygium (Fig. 3): Anal point 0.08 mm long with 3 setae on each side. Gonocoxite well developed having 10-12 setae; gonostylus little swollen bearing 12 small setae along its inner apical margin. Appendage 1 bare, fila-

mentous and bent at tip, appendage 2 outwardly bent with 10 apical incurved setae.

FEMALE: Body length 2.78 mm, wing length 1.72 mm and breadth 0.57 mm.

Similar to male with usual sex differences. Antenna yellow except dark brown flagellomere V, length ratio of flagellomeres I-V 23:18; 20:19:38, AR 0.48. *Genitalia* (Fig. 4): Notum 0.19 mm long. Coxosternapodeme S shaped. Gonapophysis VIII divided into long dorsomesal lobe (Fig. 5) and a stout ventrolateral lobe (Fig. 6). Apodeme lobe (Fig. 7) weak. Gonocoxite IX with 2 setae. Post-genital plate V shaped. Seminal capsules rounded, ducts of seminal capsules joined together before opening to the vagina.

Material examined: Holotype ♂ (Type no. 104, B.U. Ent.), Kakdwip, West Bengal, 11.xi.1978, Coll. A. K. Chatterjee. Allotype ♀, data same as holotype. Paratypes 5 ♂♂, 3 ♀♀, Burdwan, West Bengal., 23-26, x.1979, Coll. M. Ghosh; 2 ♂♂, Pasighat, Arunachal

Pradesh, 2.viii.1979, Coll. B. Bhuiyan. Types and paratypes are in the collections of insects in the University of Burdwan.

This species appears to be close to *Polypedilum nubifer* (Skuse) from Formosa, Sri Lanka, Africa, Australia and Japan in respect of some aspects of wing, leg and male hypopygium. It shows affinity to *P. brunicornis* Kieffer from African Countries in anal point and gonostylus and with *P. annulatum* Freeman (1958) from Sudan in wing spots, chaetotaxy of thorax and hypopygeal features. But the characters like details of wing markings and hypopygium of male clearly distinguish it as a new member of the genus *Polypedilum* Kieffer.

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ON A NEW SPECIES OF THE GENUS *IRDEX* BURR (DERMAPTERA: LABIIDAE) FROM SRI LANKA¹

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(With six text-figures)

Through the kindness of Dr. Karl V. Krombein, Museum of Natural History, Smithsonian Institution, Washington, D.C., U.S.A., I received

for study four specimens of Dermaptera which were collected during the course of a field project, "Biosystematic studies of insects of Ceylon". Of these one male representing a new species is described below.

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